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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/846,069	04/30/2001	Henri Jacques Suermondt	10010076-1	4518

7590   07/08/2003

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EXAMINER
EHICHIOYA, FRED I

ART UNIT	PAPER NUMBER
2172	2

DATE MAILED: 07/08/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 07-01)

Office Action Summary	Application No. 09/846,069	Applicant(s) SUERMONDT ET AL.
	Examiner Fred I. Ehichioya	Art Unit 2172

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☐ Responsive to communication(s) filed on _____ .

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1 - 35</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>1 - 35</u> is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .

4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____ .

DETAILED ACTION

1. The application has been examined.

2. Claims 1 – 35 are pending in this office action.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by
another filed in the United States before the invention by the applicant for patent or (2) a patent
granted on an application for patent by another filed in the United States before the invention by the
applicant for patent, except that an international application filed under the treaty defined in section
351(a) shall have the effects for purposes of this subsection of an application filed in the United States
only if the international application designated the United States and was published under Article 21(2)
of such treaty in the English language.

Claims 1, 3 – 10, 12 – 21, 23, 25 - 35 are rejected under 35 U.S.C 102(e) as

been anticipated by U.S. Patent 6,519,580 issued to David E. Johnson et al (hereinafter

"Johnson").

Regarding claim 1, Johnson teaches a method categorization of an item

comprising:

providing a plurality of categories organized in a hierarchy of categories (see

column 4, lines 62 - 65);

providing a plurality of categorizers corresponding to the plurality of categories

(see column 2, lines 39 – 40);

featurizing the item to create a list of item features (see column 4, lines 41 – 45);

using the list of item features in a categorizer system including the plurality of

categorizers for determining a plurality of levels of goodness (see column

6, lines 1 – 16);

using one of the plurality of levels of goodness for invoking an additional

categorizer

of the plurality of categorizers as required (see column 14, lines 24 - 65);

categorizing the item in the categorizer system in the plurality of categories

based on

the respective plurality of levels of goodness (see column 17, lines 59 –

67); and

returning the item categorized (see column 18, lines 15 – 21).

Regarding claim 3, Johnson teaches using a categorizer system knowledge base

for determining the level of goodness for a

category with the list of item features(see column 6, lines 51 – 65).

Regarding claim 4, Johnson teaches listing the plurality of categories and the

respective levels of goodness on a list; and categorizing from the list (see column 6,

lines 63 – 67).

Regarding claim 5, Johnson teaches returning one category for the item among

the plurality of categories selected from a

group consisting of the one category with the best level of goodness for all the plurality

of categories and with the best level of goodness for which determining is completed

where all of the plurality of categories are not compared (see column 18, lines 15 – 21).

Regarding claim 6, Johnson teaches returning a plurality of categories for the

item among the plurality of categories

returns a plurality of categories selected from a group consisting of categories up to a

fixed number of the plurality of categories, categories having more than a fixed level of

goodness, categories fulfilling a user specified preference, categories not from a

categorizer, and categories which are a combination thereof (see column 18, lines 15 –

21).

Regarding claim 7, Johnson teaches returning the category for a plurality of items

establishes a categorizer system

knowledge base for a topic hierarchy (see column 18, lines 15 – 21).

Regarding claim 8, Johnson teaches listing a plurality of labels for each of the

plurality of categories (see column 1, lines 24 – 27); and

training a categorizer system trainer using a plurality of items having known

categories and the plurality of labels to provide a categorizer system knowledge base

(see column 6, lines 39 – 42).

Regarding claim 9, Johnson teaches providing a categorizer system knowledge

base (see column 2, lines 39 – 40);

using a plurality of items with known categories to learn knowledge in the

categorizer system knowledge base (see column 1, lines 24 – 27).

Regarding claim 10, Johnson teaches providing a categorizer system knowledge

base (see column 2, lines 39 – 40);

providing a plurality of categorizers, each using knowledge in a categorizer

system   knowledge base and the list of item features to compute a degree of

goodness for a plurality of categories, independent of other categorizers, each using a

subset of item features to compute a degree of goodness for a plurality of categories,

independent of other categorizers, and each subset independent of subsets used by

other categorizers (see column 2, lines 39 – 64); and

providing a mechanism to resolve the levels of goodness for a plurality of

categories resulting from multiple categorizers into a combined level of goodness for a

plurality of categories (see column 2, lines 1 – 10 and lines 65 – 67).

Claim 12 is essentially the same as claim 1 except that it sets forth the claimed

invention as a method for categorization of a document rather than a method for

categorization of an item and therefore rejected for the same reasons as applied

hereinabove.

Regarding claim 13, Johnson teaches determining the plurality of levels of

goodness includes using a process selected from

a group consisting of Naive Bayes, quantitative decision-tree classifiers such as C4.5,

Bayesian networks, rule-based multi-class classifiers that output a degree of goodness,

conditional probability statements, simple heuristics, and a combination thereof (see

column 1, lines 40 – 43 and column 18, lines 42 – 45).

Claim 14 is essentially the same as claim 3 except that it sets forth the claimed

invention as a method for categorization of a document rather than a method for

categorization of an item and therefore rejected for the same reasons as applied

hereinabove.

Claim 15 is essentially the same as claim 4 except that it sets forth the claimed

invention as a method for categorization of a document rather than a method for

categorization of an item and therefore rejected for the same reasons as applied

hereinabove.

Claim 16 is essentially the same as claim 5 except that it sets forth the claimed invention as a method for categorization of a document rather than a method for categorization of an item and therefore rejected for the same reasons as applied hereinabove.

Regarding claim 17, Johnson teaches returning a plurality of categories for the document among the plurality of categories returns a plurality of categories selected from a group consisting of categories up to a fixed number of the plurality of categories, categories having more than a fixed level of goodness, categories fulfilling a user specified preference, categories not from a categorizer, and categories which are a combination thereof (see 17, lines 61 – 67 and column 18, lines 15 – 21).

Claim 18 is essentially the same as claim 7 except that it sets forth the claimed invention as a method for categorization of a document rather than a method for categorization of an item and therefore rejected for the same reasons as applied hereinabove.

Claim 19 is essentially the same as claim 8 except that it sets forth the claimed invention as a method for categorization of a document rather than a method for categorization of an item and therefore rejected for the same reasons as applied hereinabove.

Claim 20 is essentially the same as claim 9 except that it sets forth the claimed invention as a method for categorization of a document rather than a method for categorization of an item and therefore rejected for the same reasons as applied hereinabove.

Claim 21 is essentially the same as claim 10 except that it sets forth the claimed invention as a method for categorization of a document rather than a method for categorization of an item and therefore rejected for the same reasons as applied hereinabove.

Claim 23 is essentially the same as claim 1 except that it sets forth the claimed invention as a system for categorization of an item rather than a method for categorization of an item and therefore rejected for the same reasons as applied hereinabove.

Claim 25 is essentially the same as claim 3 except that it sets forth the claimed invention as a system for categorization of an item rather than a method for categorization of an item and therefore rejected for the same reasons as applied hereinabove.

Regarding claim 26, Johnson teaches a categorizer system trainer trained using a plurality of items having known categories and the plurality of labels to provide a

categorizer system knowledge base (see column 3, lines 24 – 28 and column 6, lines 39 – 42).

Regarding claim 27, Johnson teaches a system for categorization of an item comprising:

a categorizer system knowledge base having a plurality of categories organized in a hierarchy of categories and having respective lists of category features (see column 4, lines 62 – 65 and column 6, lines 63 - 67);

a featurizer for featurizing the item to create a list of item features (see column 2, lines 39 - 40); and

a categorizer system connected to the categorization system knowledge base including:

a plurality of categorizers having one of the plurality of categories, the plurality of categorizers for using the list of item features with the lists of category features to respectively determine a plurality of levels of goodness, the plurality of categorizers categorizing the item in the categorizer system in the plurality of categories based on the respective plurality of levels of goodness (see column 16, lines 1 – 16 and column 17, lines 59 – 67),

a mechanism for using one of the plurality of levels of goodness for invoking an additional categorizer of the plurality of

categorizers as required (see column 6, lines 63 - 67); and

a return for returning the item categorized (see column 18, lines 15 - 21).

Regarding claim 29, Johnson teaches the categorizer system knowledge base

determines the lists of category features (see column 6, lines 51 - 65).

Regarding claim 30, Johnson teaches the plurality of categorizers include a list

mechanism for listing the plurality of categories and the respective levels of goodness

(see column 6, lines 63 – 67); and

the plurality of categorizers categorizes from the list mechanism (see column 6,

lines 51 - 65).

Regarding claim 31, Johnson teaches the return returns one category for the

item among the plurality of categories selected from a group consisting of the one

category with the best level of goodness for all the plurality of categories and with the

best level of goodness for which determining is completed where all of the plurality of

categories are not compared (see column 18, lines 15 - 21).

Regarding claim 32, Johnson teaches the return returns a plurality of categories

for the item among the plurality of categories returns a plurality of categories selected

from a group consisting of categories up to a fixed number of the plurality of categories,

categories having more than a fixed level of goodness, categories fulfilling a user

specified preference, categories not from a categorizer, and categories which are a

combination thereof (see column 18, lines 15 - 21).

Regarding claim 33, Johnson teaches the return returns the category for a

plurality of items to the categorizer system knowledge base for building a topic hierarchy

(see column 18, lines 15 - 21).

Regarding claim 34, Johnson teaches a further listing mechanism for listing a

plurality of labels for each of the plurality of categories (see column 1, lines 24 – 27);

and

a categorizer system trainer trained using a plurality of items having known

categories and the plurality of labels to provide the categorizer system knowledge base

(see column 6, lines 39 – 42).

Regarding claim 35, Johnson teaches a system for categorization of an item

comprising:

a categorizer system knowledge base having a plurality of categories having

respective lists of category features (see column 4, lines 62 – 65 and column 6, lines 63

– 67);

a featurizer for featurizing the item to create a list of item features (see column 2,

lines 39 – 40); and

a categorizer system connected to the categorizer system knowledge base

including:

a plurality of categorizers having the plurality of categories, the plurality of

categorizers for determining the list of item features with the lists of category

features to respectively determine a plurality of levels of goodness, the plurality

of categorizers categorizing the item in the categorizer system in the plurality of

categories based on the respective plurality of levels of goodness (see column

16, lines 1 – 16 and column 17, lines 59 – 67),

a mechanism for using one of the plurality of levels of goodness for

invoking an additional categorizer of the plurality of categorizers as required a

listing mechanism for listing the plurality of categories and the respective levels

of goodness on a list (see column 6, lines 63 – 67), and

a return for returning a category for the item from the list (see column 18,

lines 15 – 21).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set
forth in section 102 of this title, if the differences between the subject matter sought to be patented and
the prior art are such that the subject matter as a whole would have been obvious at the time the
invention was made to a person having ordinary skill in the art to which said subject matter pertains.
Patentability shall not be negatived by the manner in which the invention was made.

Claims 2, 11, 22, 24 and 28 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Johnson in view of U.S Patent 6,233,575 issued to Rakesh Agrawal

et al (hereinafter "Agrawal").

Regarding claim 2, Johnson does not explicitly teach using the list of item

features determines the plurality of levels of goodness using a process to quantify the

plurality of levels of goodness, to prioritize the plurality of levels of goodness, and to

resolve two levels of goodness into a third level of goodness.

Agrawal teaches using the list of item features determines the plurality of levels

of goodness using a process to quantify the plurality of levels of goodness, to prioritize

the plurality of levels of goodness, and to resolve two levels of goodness into a third

level of goodness (see Fig.2; column 9, lines 58 – 67; column 11, lines 64 – 67 and

column 12, lines 1 – 11).

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to combine teaching of Johnson with the teaching of Agrawal

wherein levels are the hierarchical structure of the items. Resolving the levels is

breaking the hierarchical levels of nodes and leaves. The motivation is that the

hierarchical levels make searching of items or document easier.

Regarding to claim 11, Johnson teaches a method for categorization of an item

comprising:

providing a plurality of categories organized in a hierarchy of categories and

having respective lists of category features using a categorizer system knowledge base

for determining the lists of category features (see column 6, lines 63 – 67);

providing a plurality of categorizers corresponding to one of the plurality of

categories (see column 6, lines 1 – 3 and lines 39 – 42);

featurizing the item to create a list of item features (see column 2, lines 39 – 40);

using one of the plurality of levels of goodness for invoking an additional

categorizer of the plurality of categorizers as required (see column 14, lines 24 – 65);

categorizing the item in the categorizer system in the plurality of categories

based on the respective plurality of levels of goodness (see column 17, lines 59 – 67);

listing the plurality of categories and the respective levels of goodness on a list

(see column 1, lines 24 – 27 and column 6, lines 63 – 67); and

returning a category for the item from the list (see column 6, lines 51 – 65 and

column 18, lines 15 – 21).

Johnson does not explicitly teach using the list of item features in a categorizer

system including the plurality of categorizers with the lists of category features to

respectively determine a plurality of levels of goodness, the plurality of levels of

goodness determined using a process to quantify the plurality of levels of goodness, to

prioritize the plurality of levels of goodness, and to resolve two levels of goodness into a

third level of goodness.

Agrawal teaches using the list of item features in a categorizer system including

the plurality of categorizers with the lists of category features to respectively determine

a plurality of levels of goodness, the plurality of levels of goodness determined using a

process to quantify the plurality of levels of goodness, to prioritize the plurality of levels

of goodness, and to resolve two levels of goodness into a third level of goodness (see column 11, lines 64 – 67 and column 12, lines 1 – 11).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine teaching of Johnson with the teaching of Agrawal wherein levels are the hierarchical structure of the items. Resolving the levels is breaking the hierarchical levels of nodes and leaves. The motivation is that the hierarchical levels make searching of items or document easier.

Claim 22 is essentially the same as claim 11 except that it sets forth the claimed invention as a method for categorization of a document rather than a method for categorization of an item and therefore rejected for the same reasons as applied hereinabove.

Claim 24 is essentially the same as claim 2 except that it sets forth the claimed invention as a system rather than a method and therefore rejected for the same reasons as applied hereinabove.

Regarding claim 28, Johnson does not explicitly teach the plurality of categorizers determine the plurality of levels of goodness using a process to quantify the plurality of levels of goodness, to prioritize the plurality of levels of goodness, and to resolve two levels of goodness into a third level of goodness.

Agrawal teaches the plurality of categorizers determine the plurality of levels of goodness using a process to quantify the plurality of levels of goodness, to prioritize the plurality of levels of goodness, and to resolve two levels of goodness into a third level of goodness (see column 11, lines 64 – 67 and column 12, lines 1 – 11).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine teaching of Johnson with the teaching of Agrawal wherein levels are the hierarchical structure of the items. Resolving the levels is breaking the hierarchical levels of nodes and leaves. The motivation is that the hierarchical levels make searching of items or document easier.

Conclusion

5.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Fred I.

Ehichioya whose telephone number is 703-305-8039. The examiner can normally be

reached on M - F 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Kim Y. Vu can be reached on 703-305-4393. The fax phone numbers for

the organization where this application or proceeding is assigned are 703-746-7239 for

regular communications and 703-746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or

proceeding should be directed to the receptionist whose telephone number is 703-303-

3900.

Fred Ehichioya
June 30, 2003

SHAHID AL ALAM
PRIMARY PATENT EXAMINER